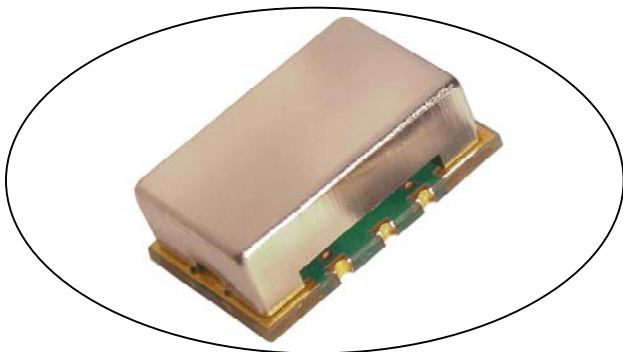


# HCMOS/TTL VCXO with Enable/Disable

## CVHD-956 Model 9x14 mm SMD, 3.3V, HCMOS/TTL

<b>Frequency Range:</b>	38.880MHz to 180MHz
<b>Temperature Range:</b>	0°C to 70°C
(Option X)	-40°C to 85°C
<b>Storage:</b>	-45°C to 90°C
<b>Frequency Stability:</b>	±25ppm, ±50ppm
<b>Input Voltage:</b>	3.3V ±0.3V
<b>Input Current:</b>	30mA Max
<b>Control Voltage:</b>	1.65V ±1.65V
<b>Settability At Nominal:</b>	1.65V ±0.25V
<b>Output:</b>	HCMOS/TTL Compatible
Symmetry:	45/55% Max
Rise/Fall Time:	5ns Max @ 20% to 80% Vcc
Pullability APR:	±50ppm Min.
Linearity:	±10% Max
Load:	30pF Max
Logic "1" Level:	2.4V Min
Logic "0" Level:	0.4V Max
Current:	I <sub>OL</sub> = -24mA Max I <sub>OH</sub> = +24mA Max
Disable Time:	100ns Max
Start-up time:	2ms Typical, 10ms Max
<b>Modulation BW:</b>	10kHz @ -3dB Min.
<b>Period Jitter:</b> (20,000 periods)	3.5ps RMS (1-sigma) Max
<b>Phase Jitter:</b> 12kHz~40MHz	0.5ps RMS (1-sigma) Max
<b>Total Jitter:</b> (100,000 periods)	25ps peak-to-peak Max
<b>Phase Noise:</b> 10Hz	-60 dBc/Hz
Typical @ 156.25MHz 100Hz	-85 dBc/Hz
1kHz	-115 dBc/Hz
10kHz	-140 dBc/Hz
100kHz	-160 dBc/Hz
<b>Aging:</b>	<5ppm 1st/yr, <2ppm every year thereafter



### Applications:

Satellite uplinks/downlinks  
High Definition Video Equipment  
Switch Applications

Designed using FR5 PCB & HFF crystal technology to provide a Low Noise, Low Jitter Voltage Controlled Crystal Oscillator solution at a competitive price.

Specifications subject to change without notice.

TD-040505 Rev. D

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# HCMOS/TTL VCXO with Enable/Disable

**CVHD-956 Model**  
9x14 mm SMD, 3.3V, HCMOS/TTL



### Crystek Part Number Guide

**CVHD - 956 X - 50 - 74.175800**

- |    |  |
|----|--|
| #1 | Crystek SMD HCMOS VCXO                   |
| #2 | Model 956 = 3.3V 9x14mm HFF VCXO         |
| #3 | Temp. Range: Blank = 0/70°C, X= -40/85°C |
| #4 | Stability: (see Table 1)                 |
| #5 | Frequency in MHz: 3 or 6 decimal places  |

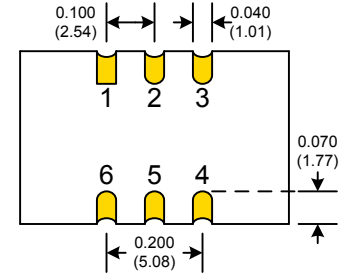
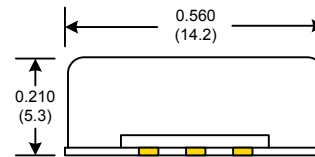
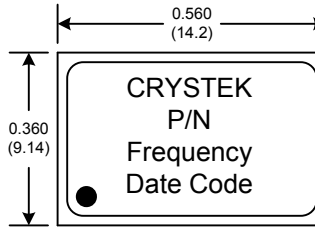
#### Stability Indicator:

50	± 50ppm
25	± 25ppm

\*\*Note -40/85°C only available in ± 50ppm

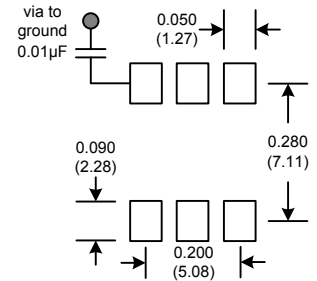
Table 1

Example:  
CCPD-956X-50-74.250 = 3.3V, 45/55, -40/85°C, 50ppm, 74.250 MHz

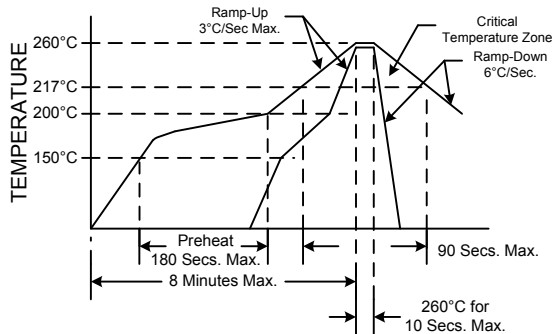


PIN	Function
1	Vcont
2	Tri-State
3	GND
4	OUT
5	NC
6	Vdd

#### SUGGESTED PAD LAYOUT



#### RECOMMENDED REFLOW SOLDERING PROFILE



NOTE: Reflow Profile with 240°C peak also acceptable.

Tri-State Function	
Tri-State pin	Output pin
Open	Active
"1" level 2.2V Min	Active
"0" level 0.8V Max	High Z
Internal Pullup Resistance	50 kΩ Min

#### Mechanical:

- Shock:
- Solderability:
- Vibration:
- Solvent Resistance:
- Resistance to Soldering Heat:

- MIL-STD-883, Method 2002, Condition A
- MIL-STD-883, Method 2003
- MIL-STD-883, Method 2007, 10g
- MIL-STD-202, Method 215
- MIL-STD-202, Method 210, Condition I or J

#### Environmental:

- Thermal Shock:
- Moisture Resistance:

- MIL-STD-883, Method 1011, Condition A
- MIL-STD-883, Method 1004

#### Packaging:

- Tape/Reel: 100ea, 250ea, 500ea 24mm Tape

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